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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,297	06/28/2001	Joachim Sachs	52275-00005USPX	7602

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EXAMINER
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DAVIS, CYNTHIA L

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/894,297	<b>Applicant(s)</b> SACHS ET AL.	
	<b>Examiner</b> Cynthia L. Davis	<b>Art Unit</b> 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/12/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 17-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2 and 17-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-2 and 17-27, drawn to synchronizing a timer of the upper layer when the lower layer transmits, classified in class 370, subclass 503.
  - II. Claims 3-13 and 28-38, drawn to scheduling packets according to a channel access delay, classified in class 370, subclass 468.

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are two different methods; one is concerned with timer synchronization, the other with scheduling.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Ross Robinson on 9/16/2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-2 and 17-27. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3-13 and 28-38 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 17, 18, 20, and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Noneman.

Regarding claim 1, detecting the start of a transmission by the lower protocol layer is disclosed in Noneman, column 1, lines 37-38 (frames are sent by the physical layer). Notifying the upper protocol layer by the lower protocol layer when a transmission is started, and synchronizing at least one timer of the upper protocol layer according to the notification is disclosed in column 1, lines 34-40 (the timer is related to resource allocation, which is a higher layer than the physical layer; it is reset when a frame is sent by the physical layer).

Regarding claim 17, Means for detecting the start of a transmission by the lower protocol layer is disclosed in Noneman, column 1, lines 37-38 (frames are sent by the physical layer). Means for notifying the upper protocol layer by the lower protocol layer when a transmission is started, and means for synchronizing at least one timer of the upper protocol layer according to the notification is disclosed in column 1, lines 34-40 (the timer is related to resource allocation, which is a higher layer than the physical layer; it is reset when a frame is sent by the physical layer).

Regarding claim 18, at least one of a user equipment and a network node is disclosed in column 1, lines 27-30 (disclosing a base station, or network node, and mobile stations, or user equipment).

Regarding claim 20, a notification being sent at the start of a transmission or at the end of a delay is disclosed in Noneman, column 1, lines 37-38 (the timer is notified when a frame is sent).

Regarding claim 26, the upper protocol layer is a radio link control sub-layer of a data link layer is disclosed in Noneman, column 3, lines 25-28 (the network is a radio linked network with a radio link control sublayer that allocates resources to mobile users).

Regarding claim 27, the transmission is performed on a channel that can be shared by at least one of a plurality of several users and data flows is disclosed in Noneman, column 3, lines 25-28 (the system is a typical radiotelephone system, which typically has a plurality of mobile users and data flows).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 19, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noneman in view of Pasternak.

Regarding claims 2 and 19, the timer models a round-trip time or a back-off time is missing from Noneman. However, Pasternak discloses in column 9, lines 28-30, a timer that models a back-off time. It would have been obvious to one skilled in the art at the time of the invention to use the timer of Pasternak in the structure of Noneman. The motivation would be to use a well known contention algorithm to resolve collisions (Pasternak, column 9, lines 20-22).

Regarding claim 21, a total channel access delay comprises at least two separate components and a notification is sent between the at least two separate components is missing from Noneman. However, Pasternak discloses in column 9, lines 10-12 that the ST's and the base station communicate as to queue status, which would involve notifying the base station regarding delay. It would have been obvious to one skilled in the art at the time of the invention to have the mobile and BST of Noneman communicate as to queue status. The motivation would be to allow the BST to consider the queue status in prioritizing grants (Pasternak, column 9, lines 10-12).

Regarding claim 22, the channel access delay includes a component of arbitrary length and at least one of a notification and a scheduling is performed before the component of arbitrary length is missing from Noneman. However, Pasternak discloses in column 9, lines 26-28 that the choice of a randomly chosen slot gives the delay an arbitrary component. It would have been obvious to one skilled in the art at the time of the invention to have a random delay component in the system of Noneman. The motivation would be to use a well known contention algorithm to resolve collisions (Pasternak, column 9, lines 20-22).

Regarding claim 23, a scheduling process is finished immediately before the scheduled data packets are transmitted is missing from Noneman. However, Pasternak discloses in column 9, lines 23-30 that the scheduling occurs before transmission. It would have been obvious to one skilled in the art at the time of the invention to schedule the packets before transmission in the system of Noneman. The motivation would be to use a well known contention algorithm to resolve collisions (Pasternak, column 9, lines 20-22).

Regarding claim 24, a notification is a primitive is missing from Noneman. However, Pasternak discloses this in column 8, lines 35 (the MAC is made of up primitives). It would have been obvious to one skilled in the art at the time of the invention to use primitives in the system of Noneman. The motivation would be to use primitives to describe functions implemented in the hardware of the system (Pasternak, column 8, lines 33-37).

Regarding claim 25, the lower protocol layer is a medium access control sub-layer of a data link layer is missing from Noneman. However, Pasternak discloses a MAC in column 8, lines 7-13, and figure 10. It would have been obvious to one skilled in the art at the time of the invention to include a MAC in the system of Noneman. The motivation would be to have an interface for the network.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L. Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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9/29/2005

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